

ABSTRACT OF THE DISCLOSURE

A portable, low cost air supply device for accumulating and dispensing compressed air converted from photovoltaic energy. The device includes one or more photovoltaic cells, a capacitor, an electronic trigger device, a solenoid, a valve manifold, a reservoir, and a device for dispensing accumulated air. The photovoltaic cell(s) charge the small, low cost capacitor. When saturated, the capacitor is triggered by a solid-state device to discharge the electrical charge to a solenoid. The energized solenoid then extends its plunger into a hole in the valve manifold, compressing air into the manifold. The compressed air moves past a check valve, and into a storage reservoir. The solenoid rapidly de-energizes, the plunger retracts, and the solenoid is now ready for another compression stroke.